

REMARKS

In response to the Office action dated November 14, 2007, Applicants respectfully request reconsideration based on the above claim amendments and the following remarks. Applicants respectfully submit that the claims as presented are in condition for allowance.

Claims 1-36 are pending in the present Application. Claims 14-28 have been previously withdrawn. Claims 1, 3, 5, 7, 8, 11, 12, 29, 32 and 34 have been amended, leaving claims 1, 3-13 and 29-36 for consideration upon entry of the present amendments and following remarks.

Support for the amendments to the claims can at least be found in the specification, the figures, and the claims as originally filed.

No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 103

Claims 1, 7, 29-32 and 34-36 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Ishida et al. (U.S. Patent No. 7,057,678, hereinafter "Ishida") in view of Oyokata et al. (Japanese Patent No. 2002-132193, hereinafter "Oyokata"). The Examiner states that Ishida discloses all of the elements of the abovementioned claims except, *a second board, coupled to the second electrode, for providing the second electrode with the second discharge voltage*, which the Examiner further states is disclosed primarily in FIGS. 1, 4 and 5 of Oyokata. Applicants respectfully traverse.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

However, it is respectfully submitted that Oyokota discloses a lighting installation that is constituted to illuminate an object for illumination from its rear with the transmitted light from the cold cathode fluorescent tubes [2] having electrodes at each of both ends in the axial direction of the tubes by impressing high-frequency voltages from inverter circuits to the fluorescent tubes [2]. The plurality of the fluorescent tubes [2] are disposed nearly parallel to each other and circuit boards 14 formed with the inverter circuits are disposed at each one-side end of the plurality of the fluorescent tubes [2] or near the same and the high-frequency output side output terminals Vo of the inverter circuits are connected to the electrodes disposed to each one-side end of the fluorescent tubes [2]. (Abstract). Oyokota further discloses with reference to FIGS. 1 and 3 thereof that one end of each lamp [2] is disposed in a corresponding groove [9a] of a lamp holder rail [9] and sandwiched with another lamp holder rail [10]. A pair of stacked inverter circuit substrates [14] are disposed over a respective lamp holder with a member [11] disposed therebetween.

It is respectfully noted that independent claims 1 and 29 have been amended to more particularly point out and distinctly define over Ishida and Mazis (U.S. Patent No. 4,504,891, hereinafter "Mazis").

More specifically, neither Ishida nor Mazis, either alone or in combination, disclose "a first insulated body 121 having a first inward surface that makes contact with the first lamp holder 127 and a first outward surface on which a first conductive pattern 123 is formed." FIGS. 1-4 of Ishida disclose a conductive substrate 8 electrically connected to an inverter substrate 17 through a cable 15. However, according to the present invention, the first board 120 includes a first insulated body 121, and a first conductive pattern 123 is formed on the first outward surface of the first insulated body.

Further, it is respectfully submitted that Ishida does not disclose "a first connector 129 installed on the first board 120 to electrically connect the first electrodes that are coupled to the first board to an inverter 140 that generates the first discharge voltage." The Examiner alleges on page 5 of the present Office Action that Ishida discloses a connector [column 2, lines 15-19 and FIG. 4: (15)]. However, the reference number 15 indicates a cable that does not correspond to the first connector 129 but corresponds to a line 142 of the present invention. Moreover, the cable 15 is not installed on the first board.

Lastly, the Examiner states that “it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art” and cites *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8, for such a holding.

First it is respectfully submitted that *St. Regis Paper Co. v. Bemis Co.* at page 8 relied upon by the Examiner holds that “[c]ombination cannot be patented unless it is synergistic, that is, results in effect greater than the sum of several effects taken separately.” In the present invention, the first and second boards are disposed at opposite ends of the lamps and have major planar surfaces thereof facing each other such that the major planar surfaces of the first and second boards are substantially perpendicular to a longitudinal direction of each of the lamps while having opposing electrodes of each of the lamps extending through a respective first or second board to be fixed therewith. In this manner, the combination of the first and second boards and the lamps facilitates replacement of the lamps is an aspect, feature and advantage of the invention in which the problem of the prior art is discussed on page 2, lines 7-19 of the specification as originally filed. Furthermore, the Brief Summary of the Invention beginning discloses on page 2, line 25 of the specification that “[t]he present invention provides a lamp assembly in which the number of components of the lamp assembly is minimized, an assembling process is simplified and **lamps are easily replaced.**” (Emphasis added.) Therefore, the combination of the opposing first and second boards with the lamps interposed therebetween is synergistic, in that such a combination results in effect greater than the sum of the first and second boards taken separately. In other words, the first and second boards connected to the lamps therebetween and having respective first and second connectors for connection with an inverter facilitates removal and assembly of the lamps with a display device as opposed to the first and second boards being assembled and removed separately when removing/installing the lamps. Thus, the present invention is nonobvious. See also dissent of *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 12.

Neither Ishida nor Oyokata, either alone or in combination, teach or suggest, a first board having a flat plate shape and being coupled to first electrodes of the lamps to provide the first electrodes with the first discharge voltage, the first board including: a first insulated body having a first inward surface that makes contact with the first lamp holder and a first outward surface

that is opposite to the first inward surface; a first conductive pattern formed on the first outward surface of the first insulated body; and at least two first through-holes formed on the first insulated body and each of the first through-holes receiving the first electrode of each of the lamps, the first electrode extending through the first through-hole to the first outward surface of the first insulated body and being electrically connected to the first conductive pattern, as recited in amended independent claim 1, and similarly recited in amended independent claim 29. Thus Claims 1 and 29, including claims depending therefrom, i.e., Claims 2-13 and 30-36, define over Ishida in view of Oyokata.

Accordingly, it is respectfully requested that the rejection of Claims 1, 7, 29-32 and 34-36 under § 103(a) be withdrawn.

Claims 2-5 and 13 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Ishida in view of Oyokata and further in view of Mazis (U.S. Patent No. 4,504,891, hereinafter “Mazis”). The Examiner states that Ishida in view of Oyokata discloses all of the elements of the abovementioned claims except, *the first board having at least two first through-holes formed on the first insulated body, whereby each of the first through-holes receives the first electrode of each of the lamps*, which the Examiner further states is disclosed in FIG. 3 and column 2, lines 15-19 of Mazis. Applicants respectfully traverse.

First, it is respectfully noted that claim 2 has been canceled rendering rejection thereto moot.

It is further respectfully noted that Claims 3-5 and 13 depend from Claim 1, which is submitted as being allowable for defining over Ishida in view of Oyokata as discussed above. Further, it is respectfully submitted that use of the first board disclosed in Mazis does not cure the deficiencies noted above with respect to Ishida.

Moreover, the Examiner admits on page 7 of the present Office Action that Ishida does not disclose the first board having at least two first through-holes formed on the insulated body, whereby the each of the first through-holes receives the first electrode of each of the lamps. However, the Examiner alleges that FIG. 3 of Mazis teaches a first board [44]; at least one first conductive pattern [45] electrically connected to the first electrode of the plurality of lamps; and at least two first through-holes [37, 46] formed on the insulated body.

However, it is respectfully submitted that the lamp system of Mazis teaches that the regions of the conductive strips 45 on the wiring plate 44 which contact the socket contacts 28 are shown as element 46. (Col. 3, lines 55-57.) Thus, reference numeral “46” of Mazis discloses a conductive strip, not a through-hole as alleged by the Examiner.

In addition, regarding claims 3 and 30, the Examiner alleges on page 8 of the present Office Action that Ishida discloses a first terminal [column 2, line 15]. However, the first terminal 144 of the present invention is coupled to the first connector 129 installed on the first board 120, and receives the first discharge voltage from the inverter 140 through the line 142. Therefore, it is respectfully submitted that Ishida does not disclose the first terminal 144 in accordance with the present invention.

Regarding claim 4, the Examiner alleges on page 8 of the present Office Action that Ishida discloses the first connector [Figure 1: (28b)] being installed on the first conductive pattern of the first board. However, Ishida does not disclose the first connector 129 installed on the first board 120 as mentioned above regarding claim 1. Moreover, Ishida does not disclose that the first connector is installed on the first conductive pattern 123 of the first board, either, because Ishida does not disclose the first conductive pattern 123 formed on the outward surface of the first insulated body 121. It is respectfully noted that the limitation, “the connector is installed on the conductive pattern,” is also recited in claim 29.

Claims 6 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Ishida in view of Oyokata and further in view of Saito et al. (U.S. Patent No. 6,441,874, hereinafter “Saito”). The Examiner states that Ishida in view of Oyokata discloses all of the elements of claim 6 except, *the first lamp holder comprising rubber*, which the Examiner further states is disclosed primarily in FIGS. 1-7 and column 5, lines 12-16 of Saito.

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida in view of Oyokata and further in view of Saito, U.S. Patent No. 6,441,874 (hereinafter “Saito”) as applied to Claim 1, and Claims 8-11 are rejected over Ishida in view of Oyokata as applied to Claim 7 above (which limitations are included in Claim 1, as amended), all further in view of Mazis. Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida in view of

Oyokata as applied to Claim 7 above (which limitations are included in Claim 1, as amended), and further in view of Mazis in view of Saito. Claims 33 and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida in view of Oyokata as applied to Claim 29 above, and in further in view of Saito. Applicants respectfully traverse.

Dependent claims inherit all of the limitations of the respective parent claim.

Claims 6, 8-12, 33 and 34 variously depend from Claims 1 and 29. As discussed above, Ishida and Oyokata do not teach or suggest, either alone or in combination, at least all of the limitations of at least amended Claims 1 and 29. Saito also does not teach at least all of the limitations of amended Claims 1 and 29. Therefore, Saito does not remedy the deficiencies of Ishida and Mazis with respect to amended Claims 1 and 29. Accordingly, Ishida, Oyokata, Mazis and Saito do not teach all of the limitations of Claims 6, 8-12, 33 and 34.

Since Ishida, Oyokata, Mazis and Saito, alone or in combination, do not teach or suggest all of the limitations of at least Claims 6, 8-12, 33 and 34, *prima facie* obviousness does not exist regarding Claims 6, 8-12, 33 and 34 with respect to the Ishida, Oyokata, Mazis and Saito patents.

Additionally, since Ishida, Oyokata, Mazis and Saito fail to teach or suggest all of the limitations of Claims 6, 8-12, 33 and 34, clearly, one of ordinary skill at the time of Applicants' invention would not have a motivation to modify or combine the references, or a reasonable likelihood of success in forming the claimed invention by modifying or combining the references. Thus, here again, *prima facie* does not exist.

Thus, *prime facie* obviousness does not exist regarding Claims 6, 8-12, 33 and 34 with respect to the Ishida, Oyokata, Mazis and Saito patents. Applicants respectfully submit that Claims 6, 8-12, 33 and 34 are not further rejected or objected and are therefore allowable. Reconsideration and allowance of Claims 6, 8-12, 33 and 34 is respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference

with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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